

THE UNIVERSITY OF TORONTO

AMPATH-RH

Newsletter



*Message from the Director of AMPATH-University of Toronto
and Vice-Chair of Global Health and Advocacy*

Welcome to our third issue of the AMPATH Reproductive Health (AMPATH-RH) newsletter, providing you with an update on the extraordinary contributions that our department and university are making alongside our Kenyan colleagues at Moi University and Moi Teaching and Referral Hospital and our North American AMPATH colleagues, to better the lives and reproductive outcomes of women in western Kenya.

As we enter the holiday season and the 2017 New Year, we are proud to be celebrating 10 years of involvement with AMPATH. We look back with great pride on our partnerships and mutual achievements and look forward with excitement for new opportunities and further program growth. I am excited to announce that in the spring of 2017 the University of Toronto's Department of Obstetrics and Gynaecology will graduate its first fellow from the Global Women's Health and Equity fellowship program, a programmatic first in Canada. We look forward to welcoming our next fellow in the summer of 2017, and to the added clinical care provision, learning and teaching that the fellow will provide during their extended time in Eldoret as part of the AMPATH team leader position. In addition, 2016 saw the opening of the first adolescent health clinic at AMPATH, acknowledging the unique needs of this population and providing care to them.

I am exuded with gratitude to all the people who have supported and contributed to AMPATH's tripartite mission of clinical care, research and education. A special thanks to my colleague, Dr. Astrid Christoffersen-Deb, our Field Director representing the University of Toronto on the ground in Eldoret. Thank you to those who have taken the time to contribute to this issue, and to all of you who are taking the time to read about our work. 2017 promises to be a wonderful year!

As 2016 comes to an end, please consider supporting the work that the University of Toronto Department of Obstetrics and Gynaecology does in Kenya through AMPATH. Your donation will be used to continue to grow our local team and our work to support the women of western Kenya. Money goes a long way to pay for care in Kenya. For \$25 you can buy 5 women a Pap smear, for \$100 you could buy 5 women treatment before cervical abnormalities become cancer, and for \$300 you could buy a woman the surgery she needs to be cured from early stage cervical cancer. Your support can increase the chances of a woman's survival! We could not do this without you! We wish you all the very best of the holiday season and health and happiness to you and yours in 2017.

Sincerely,

DONATE NOW

Rachel Spitzer, MD, MPH, FRCSC
Vice Chair Global Health and Advocacy,
University of Toronto
Department of Obstetrics and Gynaecology

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Highlight from Moi University's 11th
International Conference:
Keynote Lecture

Eleanor Fish

This past September, Eleanor Fish was invited to be a keynote speaker at Moi University's 11th International Conference: *Aligning Training, Research & Service to Sustainable Development Goals*. Her presentation, entitled '**From bench to bedside and beyond: building capacity in translational research**,' suggested that building capacity in science and technology, through education and enhancing scientific research and with targeted partnerships presents an enormous opportunity to catalyze change. The Chancellor of Moi University, Professor Mirriam Were supported this call to action and directed the Deans in the College of Health Sciences to develop strategies to ensure that Moi University takes a leadership role.



*Eleanor Fish and
Professor Mirriam Were.*

Eleanor also participated in the evaluative discussions at the College of Health Sciences, surrounding establishing a PhD program in Immunology at Moi University. The curriculum was reviewed and deliberations continue. Lastly – and certainly an important focus of Eleanor's visit to Eldoret was meeting with the Moi University Beyond Sciences Initiative (BSI) Chapter members, to review their recent outreach activities.



*Eleanor Fish and members of Moi University's Beyond
Sciences Initiative*

Eleanor is a co-founder of the BSI at the University of Toronto, which now has members in over 22 countries around the globe. The Moi BSI Chapter (www.beyondsciences.org) initiated outreach to the

Kakuma Refugee Camp, in Turkana County, NW Kenya. BSI members have been involved with mentorship of high school children, focusing on girls, and have provided health talks to youth, surrounding family planning and HIV transmission. BSI members have also provided mentorship to local high school children.

Eleanor Fish, PhD

Canada Research Chair in Health and Immunobiology
 Director, Arthritis and Autoimmunity Research Centre,
 University Health Network
 Professor, Department of Immunology, University of Toronto
 Senior Scientist in the Toronto General Research Institute
 Fellow to the American Academy of Microbiologists

**Launch of new Adolescent Health Centre in
Eldoret, Kenya**

Heather Millar

We are so excited to announce that on November 29, 2016 the official launch and opening of the new Moi Teaching and Referral Hospital Rafiki Centre for Excellence in Adolescent Health took place.

NEWS

**Hospital for adolescents
opens doors in Eldoret**



*News article showing Moi Teaching and Referral Hospital
Chief Executive Officer Wilson Aruasa (centre) dancing with
adolescents during the official opening of the Rafiki Centre for
Excellence in Adolescent Health.*

The development of this centre has been a joint effort in fundraising and coordination from colleagues at Moi University, Moi Teaching and Referral Hospital, the University of Toronto and Indiana University and has involved physicians, epidemiologists, social scientists, nurses, and adolescent peer navigators. The clinic will start as a home for CIHR and NIH-supported programs to engage street youth in HIV prevention and care, as well as a comprehensive clinic for adolescents living with HIV. Sexual and reproductive health services will

be central to the care provided. As the clinic staff and programmatic capacity grows, we will then add on specific clinics in reproductive health, including gynaecologic and obstetrical care tailored to the needs of girls and young women.

In Kenya, adolescent sexual and reproductive health represents a major national priority. It is challenging to integrate sexual and reproductive health services for adolescents into other areas of clinical care. With an ongoing high teenage pregnancy rate, where 47% of adolescent girls have begun childbearing by age 20, it is evident that this priority needs to be addressed. As a result of high teenage pregnancy rates, these young women are less likely to complete their education, obtain sustainable employment, and less likely to be able to lift themselves and their families out of poverty. Pregnancy is a high risk state for many of these girls and women, with higher risks of obstetric fistula, premature birth, and both maternal morbidity and mortality. The new MTRH Rafiki Centre for Excellence in Adolescent Health will be a home for both innovative clinical care as well as training of clinicians and support for research into adolescent health priorities and interventions.

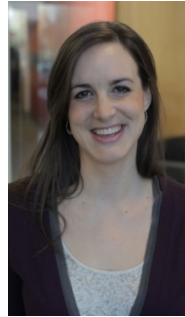


The MTRH Rafiki Centre of Excellence in Adolescent



The overall goal is to become leaders in adolescent sexual and reproductive health for the region, with the

larger goal of improving the sexual and reproductive health of this vulnerable population.



Heather Millar, MD

Fellow, Global Women's Health and Equity
University of Toronto, Department of ObGyn
Co-Director, Research, AMPATH-RH
Reproductive Health Team Leader, 2015-2016

Cardiac Disease in Pregnancy Projects

Joy Marsha

Cardiovascular disease represents a leading cause of maternal and fetal morbidity and mortality worldwide. Although quite a number of women with cardiac disease in pregnancy present at Moi Teaching and Referral Hospital for treatment and delivery, not much is known concerning cardiac disease in pregnancy and the outcomes in this region.

In an effort to address this issue and keeping up with our goal of using research to generate information that improves the care of mothers and newborns, we started three different research projects all aimed at addressing cardiac disease in pregnancy. First, we decided to look retrospectively. The project, **Evaluating Cardiac Disease in Pregnancy at a National Referral Hospital in Western Kenya** is looking at patient charts over a period of 5 years, from 2011 to 2016. Through this project we seek to define the burden of cardiac disease in pregnancy and evaluate both maternal and neonatal outcomes of cardiac disease compared to a referent population of women without cardiac disease in pregnancy. The main outcomes of interest are the types of cardiac lesions mainly seen in women presenting at the facility, maternal adverse events, and maternal and fetal outcomes. Data collection for the project is nearing completion and we hope to start the analysis soon.

We are also looking prospectively at pregnant women with cardiac disease in pregnancy coming for care at Moi Teaching and Referral Hospital and following them up to delivery and until 6 weeks postpartum. **Cardiac Disease in Pregnancy – A Prospective Study of Maternal and Fetal Outcomes in Moi Teaching and**

Referral Hospital is a Masters Research project by Dr. Phillipe Omubuombe, a first year trainee in the Obstetrics and Gynecology MMED program at Moi University. This will be a two year prospective study. The main interest is to generate data on maternal and fetal outcomes that can be used to improve existing protocols and guidelines of care for cardiac disease in pregnancy. Enrollment for this study has already been set in motion.

The **Prevalence of cardiac disease in pregnancy among a population of antenatal patients at a tertiary care institution in Western Kenya** represents the third project. It is a prevalence study that will prospectively enroll 600 women from the MTRH ANC clinic. The women will be asked questions on demographics, past and current medical and obstetric history. They will then have an echo-cardiographic examination that will reveal the presence of any cardiac disease. We are currently undergoing ethical review in IREC and hope to start the project in March 2017.

It is our hope that through these projects we will be able to gain valuable information that will enable us to improve care given to pregnant women with cardiac disease in pregnancy, while also aiding in the development of an extensive cardiac disease program in MTRH.

Joy Marsha is a Research and Project Assistant who has been working for AMPATH-RH since March 2015. She is currently the main project lead for the MNCH-Innovations Cardiology Studies. She has a Bachelor of Science in Nursing Degree and is currently pursuing a Masters in International Health Research Ethics.

Understanding medication interactions between contraceptive implants and antiretroviral medications:

Determining how best to provide reproductive healthcare for women living with HIV

One of the primary missions for AMPATH is to care for the thousands of women living with HIV in our catchment area. One of the most important areas for these women is their reproductive health care. Planning for healthy pregnancies ensures good pregnancy outcomes for mother and baby, therefore contraception is a key component of their care. Over the past few years

the popularity and use of the subdermal contraceptive implant has increased significantly, due to the fact that it is a highly effective, long-acting method with few side effects. However, recent studies have shown that women using certain types of antiretroviral medications have become pregnant while using the contraceptive implants due to interactions between the medications. Patients and providers within AMPATH also noted these pregnancies; however, insufficient information is available to tell women with implants what they should do about it or which methods might be better for these women.

AMPATH was approached by physician-researchers from the FACES HIV Care group in neighboring Kisumu to partner with them on a large study. Together, we are able to evaluate the many women within AMPATH & FACES care networks using various contraceptive methods and antiretroviral medications to determine the failure rates with each combination. Over the past 2 years we have developed and initiated this study, and data collection is now almost complete. We hope this will help guide contraceptive choices for women living with HIV to ensure they have healthy, planned pregnancies.

In addition, new “multi-purpose” technologies are emerging for the use of combinations of contraception and antiretroviral medications in different forms (including vaginal rings, injections, implants, etc). Since one portion of this study also included interviewing AMPATH clients, we took this opportunity to ask them about their acceptance of and preference for different types of multipurpose technologies. We will analyze this data to help inform our future directions in the care for women living with HIV.

These types of collaborative research projects are one way AMPATH is innovatively approaching our primary mission, and we hope we will be able to continue this work to develop new ways to *lead with care*.

Caitlin Parks, MD

Fellow, Family Planning
Assistant Professor, OBGYN, Indiana University
AMPATH Team Leader 2014-2015
Program Lead AMPATH-RH, July 2016

Reflection from Martha Smith, U of T student on rotation in Eldoret

As a first year medical student, having the opportunity to spend three months in Eldoret this summer was a unique and inspiring experience.

I really appreciated the opportunities I had to spend time in clinical settings, such as the labour and delivery ward. I learned a lot from talking with the nurses, midwives and patients, both about the delivery obstetrical care and some of the challenges faced by mothers in Kenya. In particular, I was very aware of how young many of the mothers were- most around my age or younger. One of the patients I talked to was a 17 year-old who had come from school to the hospital in labour. Her mother commented to me that her daughter was unprepared and didn't even know that labour usually lasted longer than a few minutes. Not only are adolescents more at risk for complications, but my interaction with this young woman also made me appreciate the impact of having an unintended pregnancy on her future education and life plans.



This photo was taken at Kapsimotwa Gardens, Nandi Hills.

As I've moved into my second year of medical school, having this greater understanding of the challenges encountered by women in Kenya has made me more acutely aware of the issues that exist at home. Coming back to Toronto, I have fond memories of Eldoret and all the people I had the chance to work with from the reproductive health team. They welcomed us with open arms this summer and I am extremely grateful for everything I learned from them!

Martha Smith

2nd year student, Medicine
University of Toronto

Reflection from Moi University Trainee on rotation in Toronto

Judy Kimutai

Canada was a myriad of new experiences, from the flowers on the street to the food on the table. I can say no less about the learning experience at the University of Toronto.

My obstetrics and gynecology elective in Toronto is like none I have ever experienced since I have not had an elective out of my country before. In some ways, the experience can be compared to previous electives because of the fundamental quality of learning in a new environment. The aspect of having to adjust and adapt is part and parcel of elective experiences and was also encountered in this placement.

The medical encounters in terms of disorders, diseases and approaches to treatment offered a great learning experience. I got to see medical conditions that I had only read about and almost completely did not encounter those that are commonplace in Kenya. The approaches to the conditions that are encountered in both countries were dealt with differently in some ways. The utilization of research informed protocols for management of medical conditions resulted in the optimization of outcomes for both the baby and child.

The employment of new drugs and technologies in treatment is also something that captivated my interest greatly. I got to experience robotic assisted surgery and laser surgery which were completely novel to me. Also the use of a laparoscopic approach as opposed to laparotomy is something that captivated great interest.

The healthcare team at both Mount Sinai Hospital and St. Michael's Hospital were very welcoming and accommodating, which created a pleasant learning environment. I was able to easily adapt and at the same time acquire a ton of knowledge through this experience. The students of U of T who were doing their OBGYN rotation were a great asset as they helped me navigate around the hospital and school.



Judy and Amina, with the Department of Obstetrics and Gynaecology's administrative team, after receiving their certificates for completing their elective in Toronto from Rachel Spitzer, before going back to Eldoret

On the social scene, I was able to explore a good number of sites in the city that will forever remain engraved in my mind. The trip to the Niagara Falls was a remarkable one and I will definitely remember it. The weekend getaways by hosting party were also something to look forward to. We have yet to encounter a more pleasant group of people.

For a lover of medicine, food and fashion, Toronto was a memorable experience.



In January, Judy Kimutai will be starting her sixth year of undergraduate studies in medicine and surgery at Moi University College of Health Sciences in Eldoret, Kenya.

*Left: Amina Salim
Right: Judy Kimutai*

Update from Field Director in Toronto **Astrid Christoffersen-Deb**

The end of the year never ceases to bring a much needed pause to reflect and take in all that life has brought forth. Inevitably, this means taking a scroll through all the memories captured on our phones this past year. In between documenting every milestone of our first year of parenting, I am delighted to see the continuous growth of our team and the milestones we've achieved together. Our Innovations team has continued to expand with a thriving internship now in place that welcomes candidates for a 6-month placement on our team. Most of our interns are able to use the internship as a foundational experience to secure a job at AMPATH

(and most of the time back on our MNCH team). With a great team in place, we've welcomed new projects, including a Retrospective review of contraceptive failures among HIV infected women using Efavirenz and Implants led by Caitlin Parks. This is helping us to determine how best to craft family planning policy for women with HIV. Working with colleagues in India and the UK, we've established a pathway for more intensive prenatal care before 20 weeks at MTRH and other health centres to determine whether we can determine by 20 weeks who is more likely to develop gestational diabetes and pre-eclampsia through a MRC Newton Grant, led by Wycliffe Kosgei. We are especially excited to see the start of new joint projects with MFM and Cardiology at Mount Sinai Hospital and Duke University to address high rates of maternal mortality that we see among women with rheumatic heart disease. With the anticipated start of the Moi MFM fellowship program in 2018, these projects provide fertile ground for our fellows to play an active role in designing new models of care for women with complex medical conditions in pregnancy.

In the community, we've seen the successful implementation of Malezi Mema, a positive parenting program that has been integrated into the second and third year of the Chama program. Blending microfinance opportunities, with peer support and active life skills training, these chamas are meant to disrupt the vertical transmission of poverty, unmet potential and poor health from one generation to another. We partnered with the South African based Sinovuyo Caring Families Programme to adapt a positive parenting programme. We named it Malezi Mema, which means 'Good Parenting'. The program targets parents of children under 5 years. In 2015, we formed 18 new chamas consisting of pregnant women and merged them with the existing 33 Chamas, based on locality. The Community Health Volunteers (CHVs) who were running these Chamas were then trained to deliver the parenting programme to the 600 mother-child pairs. Supported by Grand Challenges Canada, the program will continue into a second year, with the dream of further scale-up in 2018. Check out our video about the program, prepared by our summer interns.

<https://www.youtube.com/watch?v=BIPsK2ZqeZ4>



For all the moments that we document on our phones, there are many more that far exceed what can be captured with the press of a button. At AMPATH, the opportunity to take stock of where we are and where we might be heading has given rise to new strategies that attend to the population health in Western Kenya. Over the first half of the year, program leads were engaged in a conversation to map out AMPATH's future, which has taken the shape of this population health map. Take a look at it and see what it captures.



The map has now made its way across Western Kenya, from ministry of health offices to health centres, and we're excited to see how it transforms how we work together. We are confident that we are well positioned to demonstrate the power of the tripartite academic mission – service, education, and research – to the challenges of delivering population-based health care in a low-resource setting. By leading with care, we can realize the potential of transforming the current status quo into an integrated, community-based, sustainable population health model for western Kenya, and layer on the dimensions of education and research to train the next generation of health care leaders and solve the most pressing problems along the way. As a further boost to this strategy, we welcomed Francis Collins, the Director of the NIH and Tim Evans, Director of Population Health at the World Bank, who made very meaningful visits to our program this past summer.



Tim Evans, Director of Population Health at the World Bank, visiting us in Eldoret, Kenya



Inspiring meeting with students at AMPATH, Eldoret, Kenya



Francis Collins, Director of the NIH, meets our summer students Martha, Farbod and Andy and shares a tweet!

And so, as we close this year, we are looking forward to what 2017 brings. As our new fellow in Global Women's Health and Equity, Heather Millar is continuing her work as Team Leader and working with colleagues at AMPATH to equip the new RAFIKI Centre of Excellence in Adolescent Health with reproductive health services. We will be welcoming the return of Laura Ruhl and Caitlin Parks, as new faculty recruited to IU in Pediatrics and OB/GYN. And of course, we will see what dreams will come from our team leads, Justus Elung'at, Vincent Kibet, and Christian Ochieng as they continue to infuse our Innovations team with the values of optimism, empathy, integrative thinking, collaboration and willingness to experiment. And for all our learners ahead, we are most grateful to Han Sitters for her sustained devotion to their needs and all the mothers and infants who make their way to Labour Ward.

Much love to everyone in this New Year ahead.

Astrid Christoffersen-Deb

Assistant Professor, Department OBGYN

University of Toronto

Field Director, AMPATH-RH

AMPATH TEAM

Director of AMPATH-UofT and Vice-Chair of Global Health and Advocacy

Dr. Rachel Spitzer

Field Director, AMPATH-RH

Dr. Astrid Christoffersen-Deb

Research Director, AMPATH-RH

Dr. Heather Millar

Senior Advisor, AMPATH-UofT

Dr. Alan Bocking

Head, Division of Maternal-Fetal Medicine, UofT

Dr. Nan Okun

Section Lead, Gynaecologic Oncology, Beaumont Health System

Dr. Barry Rosen

Epidemiology, Dalla Lana School of Public Health

Dr. Paula Braitstein

Lead, Princess Margaret Hospital

Dr. Michael Milosevic

Associate Program Manager, Maternal, Newborn and Child Health

Julia Songok

Head, Department of Reproductive Health, Moi University School of Medicine

Dr. Elkanah Omenge

Consultant, Obstetrics and Gynaecology, Moi Teaching and Referral Hospital and AMPATH-RH

Dr. Wycliffe Kosgei

Consultant, Obstetrics and Gynaecology, Moi Teaching and Referral Hospital and AMPATH-RH

Dr. Bett Kipchumba

Supported by the Department of Obstetrics and Gynaecology, University of Toronto, Canada